



How do we impact corrosion?

US Army Corrosion Summit

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Overview

- Impact of Corrosion on the US Army
 - Dollars
 - Readiness
- Savings Due to Corrosion Control
- Training as the key to addressing corrosion
- NACE International Strategic Partner with DoD

Impact of Corrosion - \$\$

- 2002 Cost of Corrosion found a \$20 billion cost for the DoD
- The GAO stated the cost is about \$10 – 20 billion
- Subsequent studies have found that the cost for the Army is (LMI Study):
 - Ground Vehicles \$2.0 Billion per year
 - Army Aviation and Missiles \$1.6 Billion per year
 - Army Facilities \$0.45 Billion per year
 - Total \$4.05 Billion per year



Impact of Corrosion - Readiness

- Corrosion has a direct impact on readiness



Impact of Corrosion - Readiness



NACE
INTERNATIONAL

Leaders in Corrosion Control Technology

Savings Due to Corrosion Control

- Across all sectors, it was estimated that:
 - 33% of total cost of corrosion can be saved
 - It costs 10% of savings to implement better practices
 - 30% net savings is possible
- DoD might save \$6B annually

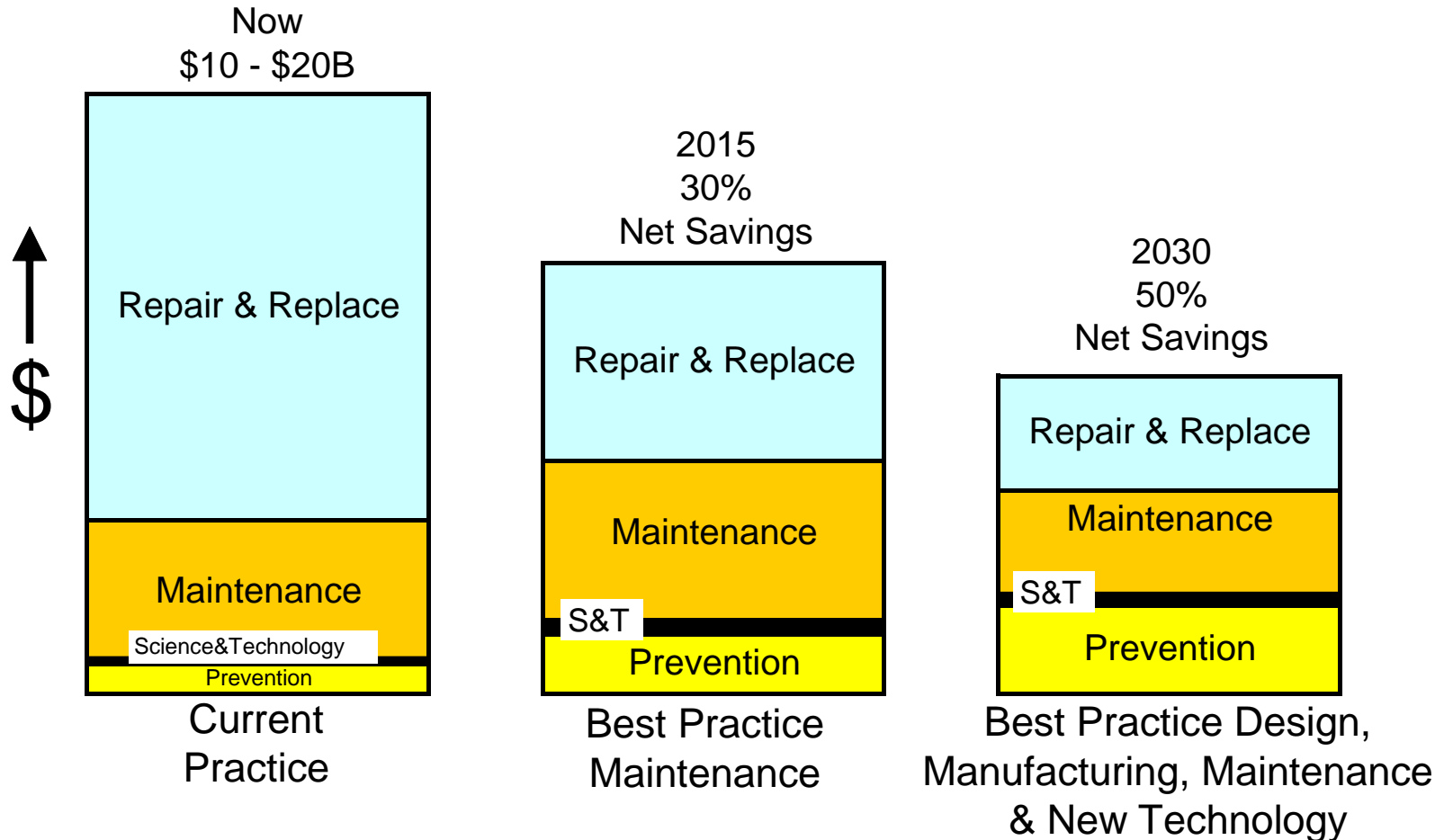
Best Practice Maintenance

- In order to improve we need:
 - An understanding of the extent of the corrosion problem
 - A link between the corrosion problems in the field and the maintenance efforts at all levels
- “Best Practice Maintenance” Program
 - Top Down driven with a commitment by highest levels
 - Include highest industry standard corrosion preventive methods and practices
 - Include continued process improvements

Best Practice Maintenance

- DoD cost of corrosion savings can be realized by systematic optimization
- Most effective program is implemented across all Services and all systems (weapon and facilities)
- Key part of corrosion prevention and mitigation program is awareness and trained personnel

Possible Long-Term Savings



DoD Challenge

- Aging of military systems poses unique challenge
 - Often no immediate promise of replacement
 - A need to develop corrosion maintenance and control programs that can carry systems well into the 21st century
 - Inter-service cooperation is required
 - Optimum approach must be developed that involves inspection, monitoring, and maintenance

DoD Challenge

- Design and acquisition of new systems
 - Use, at a minimum, current industry consensus design practices
 - Use specifications based on industry standards and upgrade where necessary to meet DoD-specific requirements and life expectancies
 - Educate the design and acquisitions professionals about the impact of corrosion
 - Train the corrosion workforce

Strategic Partnership

- With these challenges and opportunities the DoD Office of Corrosion Policy & Oversight (CPO) established a strategic partnership with NACE International
- This is a vital relationship and one of the key aspects of the partnership is to develop and provide education and training
- Also NACE International has been asked to begin an assessment of the corrosion training currently provided by the services

Current Training Opportunities

- DoD and NACE International developed a corrosion 101 (CLM 038) to provide training to the acquisition workforce (on-line at DAU)
- DoD is funding training through NACE International – contact Cliff Johnson (cliff.johnson@nace.org for additional information)
- DoD has developed a number of podcast and videos to address corrosion
- DoD is developing video games to address corrosion

NACE International

🌀 To protect people, assets, and the environment from the effects of corrosion

🌀 Founded in 1943

🌀 20,000+ Members in 100 Countries

🌀 300+ Corporate Members

🌀 400+ Publications

🌀 350 Technical Committees

🌀 200+ Standards and reports

🌀 250+ Education courses offered

🌀 Nearly 12,000 people hold a NACE certification

NACE International

- Training covers a number of areas:
 - Coatings & Coatings Inspection
 - Cathodic Protection
 - Materials Selection
 - Design
- NACE International has developed three courses for the military
 - Corrosion 101
 - CP 3 Marine
 - Water and Waste Water Corrosion

DoD Training Review

- Recently NACE International has begun a review of the current training available to military personnel
- We have been asked to determine the level of training needed for the workforce and the sufficiency of the training available
- What are your thoughts?
- Please contact Helena Seelinger at helena.seelinger@nace.org

Training

- It is important that we raise the awareness about the problem of corrosion with program managers, acquisition personnel, and leadership
- We must ensure those who are doing the work need to be trained and qualified for the job
- This will reduce the impact of corrosion to the

Questions?